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09/628,614	07/31/2000	John Christopher Brock	2386.2007-000	3854

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EXAMINER

KHOSRAVAN, JIMAN

ART UNIT	PAPER NUMBER
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2141

DATE MAILED: 04/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 09/628,614	Applicant(s) BROCK ET AL.	
	Examiner Jiman Khosravan	Art Unit 2141	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 26 January 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

DETAILED FINAL ACTION

*Amendment*

1. Receipt is acknowledged of amendment submitted January 26, 2004.

Claims 1, 2, 12, 13, and 23-28 are amended. 3-11, and 14-22 are original claims.

a). Applicant's amendment; see page 2, "Amendments to the Specification," filed January 26, 2004, with respect to the "Drawings Objections" have been fully considered and are persuasive. The objections of Figures 6 and 7 have been withdrawn.

b). Applicant's amendment; see page 10, "Amendments to the Drawings," filed January 26, 2004, with respect to the "Drawing Objections" have been fully considered and are persuasive. The objection of Figure 5 has been withdrawn.

*Claim Rejections ~ 35 U.S.C. § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 2, 4, 5, 9, 11, 13, 15, 16, 20, 22, 24, 26, and 28, are rejected under 35 U.S.C. 102(e) as being anticipated by Lechleider et al. (US 6,091,713).

a). As per claims 2, 13, 24, 26, and 28, Lechleider teaches a method to send, from a server communication device, to a data access device, a connection data request, and further to receive at the server communication device, the connection data from the data access device, the connection data associated with one or more prior connections between the server communications device and the data access device and further store the connection data in the data access device in a non-permanent manner (Col. 3, lines 30-35; Col. 5, lines 65-66; Col. 4, lines 34-37; Col. 9, lines 35-45: Lechleider teaches establishing an end to end voice band modem connection from a logic device, computer with a modem, to a remote computer of a network service provider, and collects information from the modem, where the information can be data pertaining to previous connections such as: not being able to connect, being previously disconnected or having been

connected at a lower than optimal data transfer rate, and further storing the data in the modem's internal registers).

b). As per claims 4 and 15, Lechleider further teaches determining a performance characteristic of the communication system using the retrieved connection data (Abstract; Col. 7, lines 24-47: the system gives network service providers the ability to predict the performance of any broadband transmission channels).

c). As per claims 5 and 16, Lechleider further teaches configuring a component connected to the communication system using the retrieved connection data (Col. 5, lines 56-65: Modems use the information to determine the optimum operating conditions when making an end-to-end connection).

d). As per claims 9 and 20, Lechleider further discloses a reduced training connection protocol used by the data access device where the connection data indicates a reset of the reduced training connection protocol should be considered (Col. 5, lines 56 - 65; Col. 9, lines 50-66; Col. 10, lines 1-17; Col. 9, lines 40-41; Lechleider teaches any modem and protocol which collects information about analog properties of an end-to-end connection. He further teaches the ISP to determine the root cause of a faulty connection and

guarantee pre-specified levels of performance, such as not connecting at optimal connection rates).

e). As per claims 11 and 22, Lechleider further teaches the data access device is an analog modem, a digital subscriber line modem, an integrated digital network modem, a cable modem, a power line modem, and a wireless modem (the system gives network service providers the ability to predict the performance of any broadband transmission channels (Abstract; Col. 7, lines 24-47).

***Claim Rejections ~ 35 U.S.C. § 103***

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claims 1, 12, 23, 25, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eldumiati et al. (US 2002/0012388 A1), and further in view of Hendel et al. (US 5,313,582).

As per claims 1, 12, 23, 25, and 27, Eldumiati teaches sending connection data, wherein the connection data is associated with a current connection between the server communication device and the data access device, from the server communication device to the data access device for storage on the data access device (Page 2, paragraphs [0025]-[0030]: Eldumiati discloses a modem transmitting identification data to another modem and further encoded in accordance with any number of coding algorithm. Eldumiati further teaches wherein the data exchanged has to do with the current connection such that the data can help in identifying and diagnosing connectivity problems particularly in connections that fail before communication protocols can be established). However, Eldumiati doesn't explicitly teach the server communication device to send a storage capability request to the data access device for determining storage capability of the data access device, nor does he explicitly teach the data access device replying with a storage capability reply to the server communication device, and sending the connection data based on the storage capability reply.

Hendel teaches a method and apparatus for buffering data within stations of a communication network, where each station consists of CPU, a program memory, a system memory, a communication controller, a system bus, and a communication medium interface unit (Col 2, lines 5-13). Hendel

further discloses a memory storage request from the host processor to Packet Number Assignment Unit 62', the packet number assignment unit will transmit a page request signal to memory allocation and management unit 61', which in response, searches from available space, and either returns a valid packet number or invalid number to the host processor based on available memory (Col 25, lines 24-57).

By implementing the buffering of data in the system of Eldumiati, the modems of Eldumiati would have less strain on them and have more processing power to execute other functions.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Hendel in the system of Eldumiati, because by implementing the method as described above, each station is enabled to receive and transmit consecutive data packets in a manner less sensitive to processor interrupt latency, while optimally using memory and minimizing host processor overhead and necessity of copying data between structures (Col. 1, lines 9-16).

16. Claims 6, 10, 17, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lechleider, in view of Eldumiati et al. (US 2002/0012388 A1), and further in view of Bhatia et al. (US 6,118,768).



a) As per claims 10 and 21, Lechleider discloses the claimed invention as described above. Lechleider teaches that by storing the identifiers in the modems, the system then is able to use the information collected by the modems to estimate the performance of the subscribers (Abstract: Col. 3, lines 23-27). However Lechleider does not explicitly teach the connection data comprising of a server communications device identifier, a data access device identifier, an Internet Service Provider identifier, a software version identifier, or a recently used Internet Protocol Address.

Eldumiati discloses the exchange of information containing a platform identifier, a controller revision, a DSP revision, a firmware revision, a customer platform identifier, customer code revision identifier, modem initialization strings and other configuration information and remote query by the central site of client AT command responses (Page 2, paragraphs [00250]-[0029]; Page 3, paragraphs [0039]-[0046]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Eldumiati in the system of Lechleider, because by storing the identifiers in the modems, it is helpful in identifying and diagnosing connectivity problems and it enables the ISP to determine if the client modem requires a code update by analyzing

any revision data contained in the exchange (Page 2, paragraph [0030]).

However, Eldumiati doesn't explicitly teach further storing recently used Internet Protocol Addresses.

Bhatia teaches an ISDN LAN modem that automatically adapts itself to a current network environment of a workstation connected thereto, via the LAN, and then obtains configuration information from a user, and further stores the IP addresses and subnets (Abstract; Col. 24, lines 40-41).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Bhatia in the system of Lechleider, because by storing the identifiers in the modems, it allows the modem to transparently establish the connection between the workstations and the ISP without prompting the user (Col. 5, 43-45).

b) As per claims 6 and 17, Bhatia disclose the claimed invention as described above. Lechleider-Eldumiati-Bhatia further discloses storing IP addresses in a router connected to the communication system (Bhatia: Fig. 1; Col. 5, lines 10-35).

9. Claims 3 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lechleider, and further in view of Karpoff (US 2001/0049740 A1).

As per claims 3 and 14, Lechleider disclose the claimed invention as described above but does not explicitly teach the connection data request to comprise of offset and length parameters.

Karpoff teaches a system and method for providing information over wide area networks. Karpoff further teaches a server sending a data request to a controller device containing a controller card, and such request contains file offset and the length of the file (Page 9, paragraph [0116]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Karpoff in the system of Lechleider, because by including an offset and length in the data request, the data being read can be delivered without further involving the server (Page 2, paragraph [0022]).

10. Claims 7 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lechleider, and further in view of Yip et al. (US 6,374,375).

As per claims 7 and 18, Lechleider disclose the claimed invention as described above but does not explicitly teach the data access device to support a reduced training connection protocol and using the connection data to reset the protocol.

Yip discloses a modem transmitting data in the data mode to initiate retraining. Yip teaches an ITU-T standardized modem to send test signal embedded in the data to a second modem where second modem compares the test signal and if needed, retrains the modem (Abstract; Col. 2, lines 25-56).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Yip et al. in the system of Lechleider, because by transmitting and monitoring a test signal in the data mode advantageously provides a way for the modem to monitor changing line conditions in the data mode that is simple, transparent and independent (Yip: Col. 2, lines 51-54).

11. Claims 8 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lechleider-Yip, and further in view of Davis et al. (US 6,611,563).

As per claims 8 and 19, Lechleider-Yip discloses the claimed invention as described above and further teaches using ITU-T Recommendation V.34. However, Lechleider-Yip does not explicitly teach using an ITU-T Recommendation V.92 protocol.

Davis teaches a data access device connected to a PSTN Network further connected to a Server Communication Device, which is then connected to an ISP server, where the V.90 standard has been implemented (Fig .1; Col. 1, lines 45-67; Col. 2, lines 1-40). Examiner notes that ITU-T Recommendation V.92 is a simple enhancement of V.90 incorporated here within.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use any ITU-T recommendation in the system of Lechleider-Yip because any ITU-T recommendation would have been capable to transfer data from end-to-end connections over a telephone network in a given period of time (Yip: Col. 1, lines 23-38) and because V.90 takes advantage of the digital conversions that have been made in the OSTN, and V.90 technology can accelerate data downstream from the Internet or other information source to a subscriber's computer (Davis: Col. 1, lines 45-63).

### ***Response to Arguments & Amendments***

12. Applicant's arguments filed January 26, 2004, with respect to the rejection(s) of claim(s) 2, 4, 5, 9, 11, 13, 15, 16, 20, 22, 24, 26, and 28 under

35 U.S.C. § 102(e) and claims 1, 3, 6-8, 10, 12, 14, 17-19, 21, 23, 25, and 27 under U.S.C. § 103(a) have been fully considered but are not persuasive.

a). (A) Applicant argues that the prior art relied upon does not teach or suggest, “retrieving connection data in a communication system, wherein the connection data is associated with one or more prior connections between a server communications device and a data access device.”

In response to (A), the prior art referenced teaches establishing an end to end voice band modem connection from a logic device, computer with a modem (Lechleider: Col. 4, lines 34-37: Data Access Device), to a remote computer of a network service provider (server communications device), and collects information from the modem (Lechleider: Col. 3, lines 30-35), where the information can be data pertaining to previous connections such as: failed connections (not being able to connect), being previously disconnected or having been connected at a lower than optimal data transfer rate (Lechleider: Col. 9, lines 35-45), and further storing the data in the modem’s internal registers (Lechleider: Col. 5, lines 65-66).

b). (B) Applicant argues that the prior art relied upon does not teach or suggest, “that prior connection data is sent from the data access device to the server communications device in response to a data request.”

In response to (B), the prior art referenced teaches receiving data from a modem 103 (Data Access Device), to the service provider's access server 114 (Lechleider: Col. 7, lines 23-37: server communications device), where the data pertains to previous connections such as: not being able to connect, being previously disconnected or having been connected at a lower than optimal data transfer rate (Lechleider: Col. 9, lines 35-45).

Furthermore, the service provider's access server would have to request the data inside modem 103 in order for the modem 103 to transmit the required data to the service provider's access server 114 (Lechleider: Col. 7, lines 33-35).

c). (C) Applicant argues that the prior art relied upon does not teach or suggest, "storage on a data access device access device of connection data sent from a server communications device." And furthermore, wherein "the connection data is associated with a current connection between the server communications device and the data access device."

In response to (C), the prior art referenced teaches a server modem (Internet Service Provider), transmitting identification data to another modem and further encoded in accordance with any number of coding algorithm. The Prior art further teaches wherein the data exchanged has to do with the current connection such that the data can help in identifying and

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diagnosing connectivity problems particularly in connections that fail before communication protocols can be established (Eldumiati: Page 2, paragraphs [0025]-[0030]).

d). (D) Applicant argues that there is no suggestion to combine the references.

In response to (D), the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, by implementing the buffering of data in the system of Eldumiati, the modems of Eldumiati would have less strain on them and have more processing power to execute other functions.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Hendel in the system of Eldumiati, because by implementing the method as described above, each station is enabled to receive and transmit consecutive data packets in a manner less sensitive to processor interrupt latency, while



optimally using memory and minimizing host processor overhead and necessity of copying data between structures (Hendel: Col. 1, lines 9-16).

### *Conclusion*

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jiman Khosravan whose telephone number is (703) 305-0704. The examiner can normally be reached on Monday - Friday from 9:00 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rupal Dharia can be reached on (703) 305-4003. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

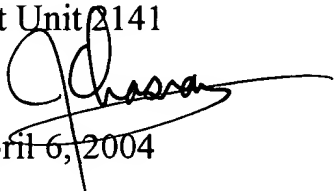
Communication via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [rupal.dharia@uspto.gov].


All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of

the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Jiman Khosravan  
Examiner  
Art Unit 2141

  
April 6, 2004

  
RUPAL DHARIA  
SUPERVISORY PATENT EXAMINER